WHAT IS CLAIMED IS:

1. A heat resisting martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% tungsten (W), 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and wherein

an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5.

2. A heat resisting steel according to claim 1, wherein the square value is not more than 1.8.

3. A heat resisting martensitic steel according to claim 1, which further comprises, by weight, not more than 1.5% Re, and 0.001 to 0.015% boron (B).

4. A heat resisting martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% W, 0.5 to 4% Co, 0.05 to 0.35% V, 0.02 to 0.30% in total of one or two elements

selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), wherein an amount ratio of W/Mo, and the Mn amount are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount.

5. A heat resisting martensitic steel according to claim 4, wherein an amount ratio of Mo/Mo + 0.5W, and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.

6. A heat resisting martensitic steel according to claim 4, which further comprises, by weight, at least one element of not more than 1.5% Re and 0.001 to 0.015% boron (B).

7. A heat resisting martensitic steel according to claim 5, which further comprises, by weight, at least one of not more than 1.5% Re and 0.001 to 0.015% boron (B).

8. A heat resisting martensitic steel according to claim 1, which further comprises, by weight, at least one of not more than 0.5% Cu, not more than 0.5% Ti, not more than 0.2% Al, not more than 0.1% Zr, not

more than 0.1% Hf, not more than 0.01% Ca, not more than 0.01% Mg, not more than 0.01% yttrium (Y), and not more than 0.01% of a rare earth element.

9. A heat resisting martensitic steel according to claim 4, which further comprises, by weight, at least one of not more than 0.5% Cu, not more than 10.5% Ti, not more than 0.2% Al, not more than 0.1% Zr, not more than 0.1% Hf, not more than 0.01% Ca, not more than 0.01% Mg, not more than 0.01% yttrium (Y), and not more than 0.01% of a rare earth element.

10. A gas turbine comprising:

a turbine stub shaft;

a plurality of turbine discs connected to the turbine stub shaft by turbine stacking bolts via turbine spacers;

turbine blades each implanted in the respective disc to rotate by high-temperature combustion gas generated in a combustion device;

a distant piece connected to the turbine discs;

a plurality of compressor rotors connected to the distant piece;

compressor blades which are implanted to compressor discs constituting the respective compressor rotor, and which compress air; and

a compressor stub shaft connected to the compressor rotors, wherein

at least one of the turbine discs, the

distant piece, the turbine spacers, the compressor disc at a last stage, and the turbine stacking bolts is made of a martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% W, 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5; or

an amount ratio of W/Mo, and the Mn amount are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount; or

an amount ratio of Mo/(Mo + 0.5W), and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a

point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.

11. A disc for a gas turbine, which is a disc member comprising a circumferential implanting section for a turbine blade, and a plurality of bores receiving a plurality of stacking bolts by which a plurality of the disc members are integrally fastened to one another, wherein

the disc is made of a martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% tungsten (W), 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5; or

an amount ratio of W/Mo, and the Mn amount

are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount; or

an amount ratio of Mo/(Mo + 0.5W), and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.

12. A gas turbine distant piece which is a cylindrical member comprising protrusions provided at both opposite ends of the cylindrical member; a plurality of bores in one of the protrusions, which receive a plurality of stacking bolts by which the cylindrical member is integrally fastened to turbine discs, and a plurality of other bores in the other protrusion, which receive a plurality of other stacking bolts by which the cylindrical member is integrally fastened to compressor discs, wherein the gas turbine distant piece is made of a martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% tungsten (W), 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of

one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), and wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5; or

an amount ratio of W/Mo, and the Mn amount are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount; or

an amount ratio of Mo/(Mo + 0.5W), and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.

13. A gas turbine compressor disc which is a disc member comprising

a circumferential implanting section for a compressor blade, and a plurality of bores receiving a plurality of stacking bolts by which a plurality of the disc members are integrally fastened to one another, wherein the gas turbine compressor disc is made of a martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% tungsten (W), 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), and wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5; or

an amount ratio of W/Mo, and the Mn amount are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount; or

an amount ratio of Mo/(Mo + 0.5W), and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.

14. A gas turbine stacking bolt which is a bar member comprising a screw portion at one end thereof, and a polygonal head portion at the other end, wherein the gas turbine stacking bolt is made of a martensitic steel comprising, by weight, 0.05 to 0.30% C, not more than 0.50% Si, not more than 0.60% Mn, 8.0 to 13.0% Cr, 0.5 to 3.0% Ni, 1.0 to 3.0% Mo, 0.1 to 1.5% tungsten (W), 0.5 to 4% Co, 0.05 to 0.35% vanadium (V), 0.02 to 0.30% in total of one or two elements selected from the group consisting of Nb and Ta, and 0.02 to 0.10% nitrogen (N), and wherein

a value of the square of a difference between the Ni amount and the Co amount, and the Ni amount are not more than values determined by a straight line drawn on a point A (1.0, 2.7%) and a point B (2.5, 1.0%) in the orthogonal coordinates shown in the attached drawing of Fig. 2 which represents a relationship between the above square value and the Ni amount, and an amount ratio of Mo/(Mo + 0.5W) is not less than 0.5; or

an amount ratio of W/Mo, and the Mn amount

are not more than values determined by a straight line drawn on a point C (1.3, 0.15%) and a point D (2.5, 0.37%) in the orthogonal coordinates shown in the attached drawing of Fig. 4 which represents a relationship between the amount ratio and the Mn amount; or

an amount ratio of Mo/(Mo + 0.5W), and the Mn amount are not less than values determined by a straight line drawn on a point E (0.25, 0.4%) and a point F (0.7, 0.15%) in the orthogonal coordinates shown in the attached drawing of Fig. 6 which represents a relationship between the amount ratio and the Mn amount.